

SAFETY DATA SHEET

Date Printed: 05/03/2024 Date Revised: 01/15/2022

SECTION 1. IDENTIFICATION

Product Identifier: (5N) 99.999% Cesium Aluminate Powder

Product Code: CS-ALO-05-P

CAS Number: N/A

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements 10884 Weyburn Ave. Los Angeles, CA 90024 Tel: +1 310-208-0551 Fax: +1 310-208-0351 Emergency telephone number: +1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) Skin sensitisation (Category 1), H317 Carcinogenicity (Category 2), H351

GHS Label elements, including precautionary statements Pictogram



Signal word: Warning Hazard statement(s) H317 May cause an allergic skin reaction. H351 Suspected of causing cancer. Precautionary statement(s) P201 Obtain special instructions before use. P202

Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/ fume/ gas/ mist/ Vapors/ spray. P272 Contaminated work clothing should not be allowed out of the workplace. P280 Wear protective gloves. P302 + P352 IF ON SKIN: Wash with plenty of soap and water. P308 + P313 IF exposed or concerned: Get medical advice/ attention. P321 Specific treatment (see supplemental first aid instructions on this label).P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention. P363 Wash contaminated clothing before reuse. P405 Store locked up. P501 Dispose of contents/ container to an approved waste disposal plant. Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Cesium Aluminate Formula: Cs6Al2O6 CAS No.: N/A No components need to be disclosed according to the applicable regulations.

SECTION 4. FIRST AID MEASURES

Description of first aid measures General advice Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. In case of skin contact Wash off with soap and plenty of water. Consult a physician. In case of eye contact Flush eyes with water as a precaution. If swallowed Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11 Indication of any immediate medical attention and special treatment needed: no data available.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Special hazards arising from the substance or mixture: no data available Advice for firefighters Wear self contained breathing apparatus for fire fighting if necessary. Further information: no data available.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing Vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

Environmental precautions

Preventfurther leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections

For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

Specific end use(s)

Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters Components with workplace control parameters Contains no substances with occupational exposure limit values. Exposure controls Appropriate engineering controls Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Personal protective equipment Eye/face protection Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Skin protection Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties Appearance Form: powder Odor: no data available Odor Threshold: no data available pH: no data available Melting point/freezing point: no data available Initial boiling point and boiling range: no data available Flash point: no data available EVaporation rate: no data available Flammability (solid, gas): no data available Upper/lower flammability or explosive limits: no data available Vapor pressure: no data available Vapor density: no data available Relative density: no data available Water solubility: no data available Partition coefficient: n-octanol/water: no data available Auto-ignition temperature: no data available Decomposition temperature: no data available Viscosity: no data available Explosive properties: no data available Oxidizing properties: no data available Other safety information: no data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity: no data available Chemical stability Stable under recommended storage conditions. Possibility of hazardous reactions: no data available Conditions to avoid: no data available Incompatible materials: Strong oxidizing agents Hazardous decomposition products Other decomposition products - no data available Hazardous decomposition products formed under fire conditions. - Cesium oxides, Aluminum oxide In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects Acute toxicity: no data available Inhalation: no data available Dermal[.] no data available no data available Skin corrosion/irritation: no data available Serious eye damage/eye irritation: no data available Respiratory or skin sensitisation Germ cell mutagenicity: no data available Carcinogenicity Limited evidence of a carcinogenic effect. IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC. ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH. NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. Reproductive toxicity no data available no data available Specific target organ toxicity -single exposure: no data available specific target organ toxicity -repeated exposure: no data available Aspiration hazard: no data available Additional Information **RTECS:** Not available

SECTION 12. ECOLOGICAL INFORMATION

Toxicity: no data available Persistence and degradability: no data available Bioaccumulative potential: no data available Mobility in soil: no data available Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted Other adverse effects: no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods Product Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Contaminated packaging: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US) Not dangerous goods IMDG Not dangerous goods IATA Not dangerous goods

SECTION 15. REGULATORY INFORMATION

SARA 302 Components SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302. **SARA 313** Components SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313. SARA 311/312 Hazards Acute Health Hazard, Chronic Health Hazard Massachusetts Right To Know Components No components are subject to the Massachusetts Right to Know Act. Pennsylvania Right To Know Components: Cesium aluminum oxide New Jersey Right To Know Components: Cesium aluminum oxide California Prop. 65 Components This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the

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